

WHAT IS CLAIMED IS:

1 1. Apparatus for inhibiting the theft of portable equipment having an
2 external wall provided with a specially designed slot having preselected dimensions wherein
3 the external wall has an inner surface, comprising:

4 an attachment mechanism including means for attaching a flexible securing
5 device to said attachment mechanism;

6 means, attachable to said attachment mechanism, for engaging the slot to
7 secure said attachment mechanism proximate the external wall;

8 and a flexible securing device to be secured to an object external to the
9 equipment and adapted to be secured to said attaching means of said attachment mechanism,
10 wherein attachment of the equipment to said object inhibits theft of the equipment.

1 2. An apparatus as claimed in claim 1 wherein said flexible securing
2 device is a cable.

1 3. An apparatus as claimed in claim 2 wherein said cable dead ends into
2 and is permanently fixed to the attachment mechanism.

1 4. An apparatus as claimed in claim 2 wherein said attachment
2 mechanism includes a base portion and an attachment member connected to said base
3 portion, said attachment member having an aperture sized to permit said cable to pass
4 through the aperture.

1 5. An apparatus as claimed in claim 4 wherein said attachment member is
2 hingably connected to said base portion.

1 6. An apparatus as claimed in claim 5 further including a screw for
2 engaging with an aperture in said base portion of the attachment mechanism, said slot being
3 sized to engage with said screw, wherein said attachment member being directly couplable to
4 said external wall by inserting said screw through said aperture and into said slot.

1 7. An apparatus as claimed in claim 2 wherein said attachment
2 mechanism includes a housing having an aperture, said aperture being sized to permit said
3 cable to pass through the aperture.

1 8. An apparatus as claimed in claim 7 wherein said engaging means
2 includes an engagement member having peripheral dimensions, the peripheral dimensions of
3 the engagement member conforming closely to the dimensions of the slot, said engagement
4 member being movable between a first position in which said engagement member is
5 insertable into said slot and a second position in which said engagement member engages
6 said inner surface of said external wall within said slot.

1 9. An apparatus as claimed in claim 8 wherein said engaging means
2 further includes a spindle having a first portion rotatably mounted within said housing and a
3 shaft fixed to the first portion and extending outwardly from the housing, said engagement
4 member being integral with the shaft at a distal end of the shaft, so that in the first position of
5 the engagement member said engagement member is insertable into the slot, said spindle
6 being rotatable 90 degrees to position said engagement member in said second position so
7 that said engagement member is misaligned with the slot and engages the inner surface of the
8 external wall.

1 10. An apparatus as claimed in claim 9 further including means for
2 preventing rotation of said housing when said engagement member is in said second position.

1 11. An apparatus as claimed in claim 10 wherein said means for
2 preventing rotation includes abutment means emanating from a lower end of the housing
3 having a cross-sectional dimension, the cross-sectional dimension of the abutment means and
4 the shaft of the spindle in combination conforming closely to the dimensions of the slot, said
5 abutment means and said shaft being insertable into the slot in said first position with the
6 engagement member aligned with the abutment means, said spindle being rotatable 90 degrees
7 to said second position in which said engagement member is misaligned with said slot and
8 said abutment means and the shaft occupy the slot.

1 12. An apparatus as claimed in claim 11 further including means for
2 retaining said engagement member in said second position, said means for retaining said
3 engagement member in said second position comprising a locking element including a
4 locking mechanism integral with said first portion of the spindle and engageable with the
5 housing, and a key adapted to selectably actuate the locking mechanism to prevent rotation of
6 the spindle.

1 13. An apparatus as claimed in claim 11 further including means for
2 retaining said engagement member in said second position, said means for retaining said
3 engagement member in said second position comprising a transverse aperture in said housing,
4 said first portion of said spindle including an aperture aligned with, the aperture in the
5 housing when the engagement member is in said second position, said flexible securing
6 device adapted to extend through both the aperture in the housing and the aperture in the
7 spindle to prevent rotation of the spindle.

1 14. Apparatus for inhibiting theft of portable equipment having an external
2 wall provided with a specially designed slot having preselected dimensions wherein said
3 external wall has an inner surface and an outer surface, comprising:

4 an attachment mechanism including means for attaching a flexible securing
5 device to said attachment mechanism;

6 means, attachable to said attachment mechanism, for engaging the slot to
7 secure said attachment mechanism proximate the external wall, said engaging means having
8 first and second engagement portions being movable between a first position in which said
9 engagement portions are insertable within said slot and a second position in which said
10 engagement portions engage said inner surface of said external wall proximate said slot; and

11 a flexible securing device to be secured to an object external to the equipment.
12 and adapted to be secured to said attaching means of said attachment mechanism, wherein
13 attachment of the equipment to said object inhibits theft of the equipment.

1 15. An apparatus as claimed in claim 14 wherein said flexible securing
2 device is a cable.

1 16. An apparatus as claimed in claim 15 wherein said attachment
2 mechanism includes a housing and said attachment means includes a transverse aperture in
3 said housing sized to permit said cable to pass therethrough to secure the housing to the
4 cable.

1 17. An apparatus as claimed in claim 16 wherein said engaging means is
2 integrally attached to said housing.

1 18. An apparatus as claimed in claim 17 wherein said engaging means is
2 injection molded.

1 19. An apparatus ⁹as claimed in claim 17 wherein said engaging means is
2 made from a resilient plastic material.

1 20. An apparatus as claimed in claim 17 wherein said engaging means
2 further comprises a shaft integrally attached to a lower end of said housing and a base portion
3 connected to said shaft, a length of said shaft being substantially equal to a thickness of the
4 external wall, said first and second engagement portions comprising first and second,
5 inwardly angled side walls located on opposite sides of said base portion, said side walls
6 being bendable to said first position so that said base portion and said shaft are insertable into
7 said slot, said side walls being spreadable back to said second position so that said base
8 portion engages said inner surface of said external wall proximate said slot and the shaft
9 occupies the slot.

1 21. An apparatus as claimed in claim 16 wherein said housing further
2 includes a first, open end sized to slidably receive said engaging means therein, said opening
3 extending to a second, closed end.

1 22. An apparatus as claimed in claim 21 wherein said engaging means
2 further comprises an engagement member including an upper portion having an aperture and
3 first and second, spaced apart engagement arms connected to said upper portion, said first and
4 second engagement portions being integrally connected to said engagement arms at a distal
5 end of the arms, a length of the arms external the housing when said engagement member is
6 completely received in the housing being substantially equal to a thickness of the external
7 wall, said arms being bendable to said first position in which said engagement portions and
8 said arms external said housing are insertable within said slot, said arms spreading out to said
9 second position wherein said engagement portions engage said inner surface of the wall and
10 said arms occupy the slot.

1 23. An apparatus as claimed in claim 21 wherein said engaging means
2 further comprises an engagement member having first and second, spaced apart engagement
3 arms connected at a proximal end of the engagement member and defining a cable clearance
4 space between the arms sized to permit said cable to pass therethrough, said first and second
5 engagement portions being integrally connected to said engagement arms at a distal end of
6 the arms, a length of the arms external the housing when said engagement member is
7 completely received in the housing being substantially equal to a thickness of the external

8 wall, said arms being bendable to said first position in which said engagement portions and
9 said arms external said housing are insertable within said slot, said arms spreading out to said
10 second position wherein said engagement portions engage said inner surface of the wall and
11 said arms occupy the slot.

1 24. An apparatus as claimed in claim 22 wherein said engaging means
2 further includes an abutment surface integral with said upper portion of the engagement
3 member proximate an upper end of said aperture, said abutment surface engaging said cable
4 when said cable is inserted through both the transverse aperture in the housing and the
5 aperture in the upper portion of the engagement member with said engagement member
6 completely within said housing to secure said housing to said engagement member.

1 25. An apparatus as claimed in claim 23 further including an abutment
2 surface at the proximal end of said engagement member for engaging said cable when said
3 engagement member is completely received within said open end of the housing and said
4 cable is inserted through both the transverse aperture in the housing and the cable clearance
5 space between the arms to secure said housing to said engagement member.

1 27. An apparatus as claimed in claim 16 wherein said housing further
2 includes a bottom end having a threaded hole sized to receive a screw therethrough.

1 28. An apparatus as claimed in claim 27 wherein said engaging means
2 further includes an engagement member having an upper portion including an aperture sized
3 to allow said screw to pass therethrough and first and second, spaced apart engagement arms
4 fixed to said upper portion defining a clearance space between the arms coupled to said
5 aperture, a length of the arms being substantially equal to a thickness of the external wall,
6 said first and second engagement portions being connected to the arms at a distal end of the
7 arms, said engagement arms and said first and second engagement portions being insertable
8 into said slot in said first position, said arms being spreadable to said second position upon
9 insertion of said screw through said hole in the housing, said aperture in the upper portion of
10 the engaging means and said clearance space, wherein said engagement portions engage said
11 inner surface of the external wall to secure the housing proximate the wall.

1 29. An apparatus as claimed in claim 15 wherein said attachment
2 mechanism includes an attachment member having an upper portion and a base portion

3 connected to said upper portion, said attaching means including an aperture in said upper
4 portion sized to permit said cable to pass therethrough.

1 30. An apparatus as claimed in claim 29 further including a housing
2 having a transverse aperture through top and bottom walls of said housing sized to permit
3 said upper portion of said attachment member to pass therethrough, said housing further
4 including an opening in a first end wall extending to a second, spaced apart closed end wall,
5 said opening being sized to slidably receive said engaging means therein.

1 31. An apparatus as claimed in claim 30 wherein said engaging means
2 further comprises an engagement member having first and second, spaced apart engagement
3 arms connected to a transverse member at a proximal end of the arms and defining a
4 clearance space between said engagement arms and said transverse member adapted to permit
5 said first portion of said attachment member to pass therethrough, said engagement portions
6 being connected to said arms at a distal end of the arms, awlength of the arms external the
7 housing being substantially equal to a thickness of the external wall when said engagement
8 member is completely received within said housing and said transverse member abuts said
9 closed end of the housing, said arms being bendable to said first position in which said
10 engagement portions and said arms are insertable within said slot, said arms spreading out to
11 said second position wherein said engagement portions engage said inner surface of the wall
12 and said arms occupy the slot.

1 32. An apparatus as claimed in claim 31 further including an abutment
2 surface at a lower end of said transverse member for engaging with said first portion of the
3 attachment member when said transverse member abuts said closed end of the housing and
4 said first portion of said attachment member is inserted through said aperture in the housing
5 and within said clearance space to thereby secure said engagement member to the attachment
6 member.

1 33. Apparatus for inhibiting theft of portable equipment having an external
2 wall provided with a specially designed generally rectangular slot having preselected
3 dimensions wherein said external wall has an inner surface, comprising:
4 an attachment mechanism including a housing and means for attaching a
5 flexible securing device to said housing;

6 means, attachable to said housing, for engaging the slot to secure said housing
7 proximate the external wall including an engagement member having peripheral dimensions,
8 said engaging means being rotatable between a first position in which said engagement
9 member is insertable within said slot and a second position in which said engagement
10 member engages said inner surface of said external wall within said slot;

11 means for preventing rotation of said housing when said engagement member
12 is in said second position;

13 means for retaining said engagement member in said second position; and

14 a flexible securing device to be secured to an object external to the equipment
15 and adapted to be secured to said attaching means of said housing, wherein attachment of the
16 equipment to said object inhibits theft of the equipment.

1 34. An apparatus as claimed in claim 33 wherein said flexible securing
2 device is a cable.

1 35. An apparatus as claimed in claim 34 wherein said attaching means
2 includes an aperture in said housing sized to permit said cable to pass therethrough.

1 36. An apparatus as claimed in claim 35 wherein said engaging means is
2 integrally attached to a lower portion of said housing.

1 37. An apparatus as claimed in claim 36 wherein said engaging means
2 further comprises a shaft, said engagement member being integral with said shaft at a distal
3 end of the shaft, a length of the shaft being substantially equal to a thickness of the external
4 wall, the peripheral dimensions of the engagement member conforming closely to the internal
5 dimensions of the slot so that in said first position said engagement member and said shaft are
6 insertable into the slot, said housing being rotatable 90 degrees to position said engagement
7 member in said second position wherein said engagement member is misaligned with the slot
8 so that said engagement member engages the inner surface of the external wall and said shaft
9 occupies a portion of said slot.

1 38. An apparatus as claimed in claim 37 wherein said means for
2 preventing rotation of said housing includes a screw threadably engagable with a thread hole
3 formed in a lower end of said housing proximate said shaft, a length of the screw external the
4 housing being substantially equal to a thickness of the external wall, the cross-sectional
5 dimensions of the screw external the housing and the shaft in combination closely

6 conforming to the dimensions of the slot so that when the engagement member is in said
7 second position, the screw is insertable through said housing and into the slot proximate said
8 shaft to a position in which said screw external the housing and said shaft occupy said slot.

1 39. An apparatus as claimed in claim 37 wherein said means for retaining
2 said engagement member in said second position includes a screw threadably engagable with
3 a thread hole formed in a lower end of said housing proximate said shaft, the length of the
4 screw external the housing being substantially equal to the thickness of the external wall, the
5 cross-sectional dimensions of the screw external the housing and the shaft in combination
6 closely conforming to the dimensions of the slot so that when the engagement member is in
7 said second position, the screw is insertable through said housing and into the slot proximate
8 said shaft to a position in which said screw external the housing and said shaft occupy said
9 slot.

1 40. An apparatus as claimed in claim 37 wherein said means for
2 preventing rotation of said housing includes a spindle having a first portion rotatably
3 mountable within the housing and a spindle arm fixed to the first portion and extending
4 outwardly from the housing proximate said shaft, a length of the arm external the housing
5 being substantially equal to the thickness of the external wall, the cross-sectional dimensions
6 of the shaft and the arm in combination closely conforming to the dimensions of the slot so
7 that when said engagement member is positioned in said second position, said arm is
8 insertable into said slot to a position in which said arm and said shaft occupy said slot.

1 41. An apparatus as claimed in claim 40 wherein said means for retaining
2 said engagement member in said second position includes an aperture formed through said
3 first portion of said spindle, said spindle being rotatable within said housing to a position in
4 which said aperture in said first portion is aligned with said aperture in the housing, said
5 cable being adapted to extend through both said aperture in the housing and said aperture in
6 the first portion of the spindle so that said spindle is rigidly fixed to said housing to prevent
7 rotation of said spindle relative to said housing.

1 42. An apparatus as claimed in claim 35 wherein said engaging means
2 further comprises a spindle having a first portion and a shaft fixed to the first portion, said
3 engagement member being integral with said shaft at a distal end of the shaft, a length of the
4 shaft being substantially equal to a thickness of the external wall, the peripheral dimensions

5 of the engagement member conforming closely to the internal dimensions of the slot so that
6 in said first position said engagement member and said shaft are insertable into the slot, said
7 spindle being rotatable 90 degrees to position said engagement member in said second
8 position wherein said engagement member is misaligned with the slot so that said
9 engagement member engages. the inner surface of the external wall and said shaft occupies
10 a portion of said slot.

1 43. An apparatus as claimed in claim 42 wherein said means for
2 preventing rotation of said housing includes abutment means emanating from a lower end of
3 the housing, said housing further including a spindle opening intermediate said abutment
4 means and extending to a closed upper end of said housing, the cross-sectional dimensions of
5 the abutment means and the shaft of the spindle in combination closely conforming to the
6 dimensions of the slot, said abutment means being insertable into the slot and the spindle
7 being receivable in the opening in the housing when said engagement member is in said
8 second position, the abutment means and the shaft of the spindle occupying the slot to
9 prevent rotation of the housing.

1 44. An apparatus as claimed in claim 43 wherein said means for retaining
2 said engagement member in said second position includes an aperture formed through said
3 first portion of the spindle, said spindle being slidably received within the opening in said
4 housing in said second position of the engagement member so that said aperture of the first
5 portion of the spindle is aligned with the aperture in the housing, said cable being adapted to
6 extend through both said aperture in the housing and the aperture in the first portion of the
7 spindle to rigidly fix said spindle to said housing to prevent rotation of said spindle relative to
8 said housing.

1 45. An apparatus as claimed in claim 44 further including at least one
2 spring mounted to said lower end of the housing.

1 46. An apparatus as claimed in claim 42 wherein said first portion of said
2 spindle is rotatably mounted within said housing with said shaft extending outwardly from a
3 lower end of the housing, a length of the shaft external the housing being approximately
4 equal to a thickness of the external wall.

1 47. An apparatus as claimed in claim 46 wherein said means for
2 preventing rotation of said housing includes abutment means emanating from a lower end of

3 the housing located on opposite sides of the shaft, the cross-sectional dimension of the
4 abutment means and the shaft of the spindle in combination conforming closely to the
5 dimensions of the slot, the shaft and the abutment means being insertable into the slot with
6 said engagement member aligned with the abutment means in said first position, said spindle
7 being rotatable 90 degrees to said second position in which said engagement member is
8 misaligned with said slot and the abutment means and the shaft occupy the slot.

1 48. An apparatus as claimed in claim 47 wherein said means for retaining
2 said engagement member in said second position includes an aperture in said first portion of
3 said spindle, said aperture of the first portion of the spindle being aligned with the aperture in
4 the housing in said second position of the engagement member, said cable being adapted to
5 extend through both the aperture in the housing and the aperture in the first portion of the
6 spindle to thereby affix said spindle to said housing to prevent rotation of said spindle relative
7 to said housing.

1 49. An apparatus as claimed in claim 48 further including a spring
2 mounted to a lower portion of said spindle for engaging with said lower end of the housing.

1 50. An apparatus as claimed in claim 46 wherein said means for
2 preventing rotation of said housing includes first and second pins mounted on opposite sides
3 of said slot and engagable with first and second pin holes in said lower end of said housing
4 located on opposite sides of said shaft.

1 51. An apparatus as claimed in claim 50 wherein said means for retaining
2 said engagement member in said second position includes an aperture formed through said
3 first portion of said spindle, said aperture of the first portion of the spindle being aligned with
4 the aperture in the housing when said engagement member is in said second position, said
5 cable being adapted to extend through the aperture in the housing and the aperture in the first
6 portion of the spindle to thereby affix said spindle to said housing to prevent rotation of said
7 spindle relative to said housing.

1 52. An apparatus as claimed in claim 48 wherein said engaging means
2 further includes a spring mounted to a lower end of said first portion of the spindle.

1 53. A method for inhibiting theft of equipment such as a personal
2 computer including the steps of:

3 providing a specially designed slot having preselected dimensions in an
4 external wall of said equipment;
5 providing an attachment mechanism having means for attaching a flexible
6 securing device to said attachment mechanism;
7 providing means attachable to said attachment mechanism for engaging with
8 said slot to secure said attachment mechanism proximate the external wall; and
9 attaching a flexible securing device to both said attachment mechanism and to
10 an object external the equipment wherein the attachment of the flexible securing device to the
11 attachment mechanism inhibits theft of the equipment.

1 54. An apparatus for inhibiting theft of portable equipment having an
2 external wall provided with a specially designed generally rectangular slot having preselected
3 dimensions wherein said external wall has an inner surface, comprising:

4 a base unit;

5 a remote unit including means for engaging the slot to secure said remote unit
6 proximate to the external wall and including an indicator; and

7 means, electrically coupled to said base unit and to said remote unit, for
8 detecting when said base unit and said remote unit have been moved apart from each other
9 beyond a particular distance, said detecting means activating said indicator when said base
10 unit and said remote unit have been moved apart beyond said particular distance.

1 55. The apparatus of claim 54 wherein said indicator comprises a self-
2 powered siren.

1 56. (Unamended) A locking system comprising:
2 a portable electronic computer having an external wall defining a security slot;
3 a housing including a slot engagement member having a slot engaging portion
4 provided with a locking member having a peripheral profile complementary to preselected
5 dimensions of said security slot which thereby permits said locking member to extend into
6 said security slot;

7 said slot engagement member being rotatable between an unlocked position
8 wherein said locking member is removable from said security slot, and a locked position
9 wherein said locking member is retained within said security slot;

10 a pin cooperatively coupled to said slot engagement member after said slot
11 engagement member is in said locked position to thereby inhibit rotation of said slot
12 engagement member to said unlocked position;
13 cable attachment means, coupled to said housing, for attaching a cable to said
14 housing; and
15 a cable, coupled to said cable attachment means, for securing said portable
16 electronic computer to an object. other than to said housing.

1 57. (Amended) The system of claim 56 wherein said pin includes a first
2 threaded portion, complementary to a second threaded portion in an aperture in said housing.

1 58. (Amended) The system of claim 56 wherein said pin cooperates by
2 extending into said security slot.

1 59. (Amended) The system of claim 56 wherein a first side of said
2 housing abuts said external wall, and
3 wherein said housing includes a cavity and a second side opposite said first
4 side that is open to access said cavity wherein said pin is insertable through said second side
5 and into said cavity to cooperate with said slot engagement member to inhibit said rotation.

1 60. (Amended) The system of claim 59 wherein said pin includes a first
2 threaded portion complementary to a second threaded portion in an aperture in said first side
3 of said housing.

1 61. (Amended) The system of claim 56 wherein said housing includes
2 sidewalls orthogonal to said first side wherein said sidewalls include opposing apertures to
3 permit said cable to extend therethrough after cooperation of said pin with said slot
4 engagement member to inhibit removal of said pin from said security slot.

1 62. (Amended) The system of claim 59 further comprising a locking
2 structure adapted for insertion into said cavity, said locking structure incorporating said pin at
3 a first end such that insertion of said locking structure into said cavity cooperates said pin
4 with said slot engagement member through an aperture in said first side.

1 63. (Amended) The apparatus of claim 62 wherein said housing includes
2 sidewalk orthogonal to said first side wherein said sidewalk include apertures and a second

3 end of [said] a spindle includes a transverse aperture collinear with said opposing apertures in
4 said sidewalls, said opposing apertures and said transverse apertures permitting said cable to
5 extend therethrough after cooperation of said pin with said slot engagement member to
6 inhibit uncooperation of said pin and said slot engagement member.

1 64. (Amended) The apparatus of claim 56 wherein said preselected
2 dimensions are about three millimeters by about seven millimeters.

1 65. (Unamended) A locking system, comprising:
2 a portable electronic device including an exterior wall defining a security slot;
3 location fixing means for attaching to a first object other than to the portable
4 electronic device;
5 a housing, coupled to said location fixing means and proximate to said
6 electronic device and including a slot engagement member having a slot engaging portion
7 provided with a locking member having a peripheral profile complementary to preselected
8 dimensions of said security slot to thereby permit said locking member to extend into said
9 slot, said slot engagement member being rotatable between an unlocked position wherein
10 said locking member is removable from the slot, and a locked position wherein
11 said locking member is retained within the slot; and
12 a pin, coupled said engagement member, for cooperating with said slot
13 engagement member when said slot engagement member is in said locked position to thereby
14 inhibit rotation of said slot engagement member to said unlocked position.

1 66. (Amended) The system of claim 65 wherein said preselected
2 dimensions are about three millimeters by about seven millimeters.

1 67. (Amended) The system of claim 56 wherein said locking member is
2 "T-shaped."

1 68. (Amended) The system of claim 65 wherein said locking member is
2 "T-shaped."

1 69. (Amended) The system of claim 65 wherein said pin cooperates by
2 extending into said security slot.

1 70. (Unamended) A cable attachment system, comprising:

2 a portable computer including an exterior wall provided with a security slot
3 having dimensions of about three millimeters by about seven millimeters;

4 a locking structure, coupled to said cable, for attaching to said security slot,
5 said locking structure comprising:

6 a housing, adapted to abut said wall adjacent said security slot,
7 said housing including a slot engagement member having a slot engaging
8 portion provided with a locking member having a peripheral profile complementary to said
9 security slot to permit said locking member to extend into said security slot, said slot
10 engagement member being rotatable between an unlocked position wherein said locking
11 member is removable from said security slot, and a locked position wherein said locking
12 member is retained within said security slot; and

13 a pin coupled through said housing adjacent to said slot engagement member
14 and cooperating with said slot engagement member after said slot engagement member is in
15 said locked position to thereby inhibit rotation of said slot engagement member to said
16 unlocked position; and

17 a cable for securing said portable computer to an object other than to said
18 housing.